DELHI PUBLIC SCHOOL, JAMMU
SESSION (2024-25)
SYLLABUS BREAK UP

CLASS-IX **SUBJECT- Mathematics**

OBJECTIVES:

1. To acquire knowledge and understanding, particularly by way of motivation and visualization, of basic concepts, terms, principles and symbols and underlying processes and skills;
2. To develop mastery of basic algebraic skills;
3. To develop an interest in students to study Mathematics as a discipline
4. feel the flow of reason while proving a result or solving a problem;
5. To develop awareness of the need for national integration, protection of environment, observance of small family norms, removal of social barriers, elimination of gender biases;
6. To develop reverence and respect towards great Mathematicians for their contributions to the field of Mathematics;
7. To develop interest in the subject by participating in related competitions;
8. To develop ability to think, analyze and articulate logically.

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Sr. No.	Month	Learning outcome	Name of Chapter	Activity
1	April	Learner will be able to • Find rational and irrational number between $\sqrt{a}$ two real numbers. • Representation of form on number line. • Express given terminating and non- terminating repeating decimals in the form of p/q. • Find condition for terminating decimals. • Find rationalizing factor and $1/a+\sqrt{b}$ rationalize number of type • Define type of polynomials on the basis of degree and number of terms. • Finding degrees of polynomials. • Factor theorem and its application. • Applications of remainder theorem. • Factorize a given polynomials. • Verify and use algebraic identities. • Concept of both axes and representation of point on it. • Represent a point in in cartesian plane. • Find mirror images through both axes. • Find foot of perpendicular to both axes.	1. Number System 2. Polynomials. 3. Coordinate geometry	1. Prepare a model of $\sqrt{2},\sqrt{3},\sqrt{5}$ by spiral method. 2. Factorzing a polynomial using paper cutting method. 3. Quiz from mycbseguide. 4. Youtube video: http://youtu.be/enHai1y5knc
2	May	• Framing of linear equations from given information	4. Linear equations.	1. Frame linear equations from

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		• Calculation of values satisfying a given or framed linear equation. • Representation of linear equation on graph. • Representation of an equation in one variable (number line) and in two variables (cartesian plane). • Concept of axioms,	5. Euclid's Geometry 6. Lines and angles.	given condition and draw graph 2. Making of type of angles using ice- cream stick.Mark your position as point on graph. Ask your friends to stand at point representing mirror images through x-axis and y- axis. . 3. Quiz (kahhot) 4. Youtube video: http://youtu.be/enHai1y5knc

		postulates, theorem given by Euclid. • Application of complementary and supplementary angles. • Application of linear pair axiom. • Application of vertically opposite angles. • Concept of parallel lines and it its applications.		
3	June/August	Learner should be able to • Application of angle and side property Apply conditions of congruency of triangles. • Application of SSS,SAS,ASA and RHS. • Application of Heron's formula in finding area of triangle.	7. Triangles. 8. Heron's formula.	1. With help of activity explain conditions of congruency of triangles Select a triangular field from your locality and find its area using heron's formula. Also find length of longest and smallest altitude. 2. Quiz (kahhot) 3. Youtube video: http://youtu.be/enHai1y5knc
4	September	**Revision sheets and sample papers will be uploaded in class groups as well as school drive**	**Revision Half-Yearly**	
5	October	Learners will be able to apply • Basic properties of quadrilaterals in solving problems. • Basic properties of parallelogram, rectangle, square and rhombus. • Applications of mid-point property of triangle.	9. Quadrilaterals + Practical (related to chapter done) from Lab manual	1. Quiz from mycbseguide. 2. Practical activities will be performed on taught topics 3. Youtube video: http://youtu.be/enHai1y5knc
6	November	Learner will be able to know • Relation between chord and subtended angles. • Relation between chord and distance from center. • Relation between chords equidistance from centers • Degree measure theorem and application. • Angle in semi- circle. Sum of opposite angles of cyclic quadrilateral. • Surfaces areas and volumes of cones, spheres and hemi-spheres • Application of surface area and volume of	10. Circles. 11. Surface area and volume.	1. Ask students of your class to stand in circle in the form of equilateral triangle. Find radius of circle and side of triangle. 2. Youtube video: http://youtu.be/enHai1y5knc 3. Students will be asked to make models of cone, sphere and hemisphere. They will be asked to derive formulas for surface area and volumes of these figures.

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		cone and sphere.		
7	December	Learner will be able to • Basic difference between primary and secondary data. • Represent given data in frequency table and find range of data. • Represent data in form of histogram, bar graph, and frequency polygon.	12. Statistics+ Practical (related to chapters done) from lab manual.	1. Collect data from your school and place where you live. Identify them as primary and secondary data. Represent them on graph in different way.i.e. Bar graph, histogram, frequency polygon 2. Youtube video: http://youtu.be/enHai1y5knc

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8	January	**Revision sheets and sample paper will be shared in class group as well as school drive.**	**Revision**	
9	February		**Annual Exams**	

CT-1

1. NUMBER SYSTEM
2. POLYNOMIALS *3.* COORDINATE GEOMETRY
4. LINEAR EQUATIONS.

CT- 2

1. LINES AND ANGLES
2. TRIANGLES

HALF YEARLY

1. NUMBER SYSTEM
2. POLYNOMIALS *3.* COORDINATE GEOMETRY
4. LINEAR EQUATIONS.
5. EUCLID'S GEOMETRY.
6. LINES AND ANGLES.
7. TRIANGLES
8. HERON'S FORMULA

CT-3

1. QUADRILATERALS.
2. CIRCLES.

CT- 4

1. SURFACE AREA AND VOLUMES
2. STASTISTICS

ANNUAL EXAMINATION

1. NUMBER SYSTEMS
2. POLYNOMIALS
3. LINEAR EQUATIONSIN TWO VARIABLES.
4. LINES AND ANGLES
5. COORDINATE GEOMETRY
6. TRIANGLES
7. STATISTICS
8. HERON'S FORMULA
9. CIRCLES
10. QUADRILATERALS
11. EUCLID'S GEOMETRY
12. SURFACE AREAS AND VOLUMES

ENRICHMENT ACTIVITY:

HALF YEARLY

1. To construct a square root spiral.

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2. To find a hidden picture by plotting and joining the various points with given coordinates in a plane.

ANNUALS

1. To form a cone from a sector of a circle and to find the formula for its curved surface area.
2. To draw histograms for classes of equal widths and varying width

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